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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,973	09/28/2001	Dan A. Steinberg	ACT-162 (1117-8)	5813

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EXAMINER

DOAN, JENNIFER

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/966,973

Applicant(s)

STEINBERG ET AL.

Examiner

Jennifer Doan

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AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-22 is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7 and 8.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings, filed on 09/28/2001, are objected to because of the following reasons:

The numbering of the figures does not match with the brief description of the drawings (there are two figures 5 on page 3 of the drawings).

Appropriate correction is required.

Specification

2. The disclosure is objected to because of the following informalities:

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

In line 6 of page 25 of the specification, the abstract has a phrase "said substrate". "Said" is an avoided phrase.

Appropriate correction is required.

Applicants' cooperation is requested in correcting any other errors of which applicants may become aware in the specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "the recess" in line 3. There is insufficient antecedent basis for this limitation in the claim 1. It is not clear what recessed part it is referring, since there is no recess mentioned in the claim 1.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2, 6 and 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshida et al. (U.S. Patent 6,632,027).

Regarding claims 1 and 2, Yoshida et al. disclose (in figures 1-5) an optical device package comprising a substrate (140) having an upper surface and an elongated linear groove (141) for receiving an optical fiber (130) (column 3, lines 3-17); an optical fiber (130) positioned within the groove (141) in the substrate (140) and having a top surface; and a frame (160) sealed to the upper surface of the substrate (140) and having a flat bottom surface, the top surface of the optical fiber (130) being at or below the level of the bottom surface of the frame (as shown in figures 4 and 5); further comprising a lid (190) having a plate of fluid material which is selected from the group consisting of silicon, glass, ceramic and metal (column 3, lines 6-7) and bonded to the frame to cover the frame.

Regarding claim 6, Yoshida et al. further disclose (figure 1 and 4) the substrate (140) has a distal end and a proximal end and the optical fiber (130) extends from a recess to at least the distal end of the substrate (140); wherein the recess is receiving an optical semiconductor component (110) and the frame (160) is configured to engage the recess.

Regarding claim 9, Yoshida et al. further disclose the substrate is fabricated from single crystal silicon (column 3, lines 58-59).

Regarding claims 10-12, Yoshida et al. further disclose (figure 1-5) an optical semiconductor component (110) is selected from the group consisting of a laser diode, light emitting diode and photodetector (column 3, lines 45-48) and mounted to the

substrate (140) (column 3, lines 15-16); wherein the optical semiconductor component has an active area positioned below the upper surface of the substrate (column 4, lines 4-7).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 3-5, 7, 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (as cited above) in view of Shuto et al. (U.S. Patent 6,585,426).

Yoshida et al. disclose all the limitations of the claimed invention except for the frame including a single piece member having band-like structure defining an opening as recited in claims 3 and 14. However, this feature is well known in the art as taught by Shuto et al. Shuto et al. teach (in figure 1) a frame (92) including a single piece member having band-like structure defining an opening. Such an element would advantageously provide the package with more attachment and protection. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Yoshida device with a frame having the above features (accordance with the teaching of Shuto et al.). Doing so would facilitate the manufacture of the package for the optical devices with low-cost and more reliable.

10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (as cited above) in view of Blonder et al. (U.S. Patent 4,897,711).

Yoshida et al. disclose all the limitations of the claimed invention except for the substrate possessing a reflecting surface for reflecting optical signals between the optical fiber and the active area. However, this feature is well known in the art as taught by Blonder et al. Blonder et al. teach the substrate possessing a reflecting surface for reflecting optical signals between the optical fiber and the active area (in column 4, lines 7-17). Such an element would advantageously capture the desirable light beams. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Yoshida device with a reflector on the substrate (accordance with the teaching of Blonder et al.). Doing so would facilitate the

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manufacture of the package for the optical devices with low-cost, more reliable and reduce the optical transmission loss.

Allowable Subject Matter

11. Claims 15-22 are allowed.

The prior art fails to disclose or reasonably suggest a method for making an optical device package having a step of forming at least one electrical lead on the substrate, wherein the electrical lead extends at least from the recess to the proximal end of the substrate.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Camlibel et al. (U.S. Patent 4,119,363), North et al. (U.S. Patent 4,210,923), Duda et al. (U.S. Patent 4,411,057), Toffetti (U.S. Patent 5,313,546) and Yap et al. (U.S. Patent 6,655,853) disclose a package for optical devices.

If a copy of a provisional application listed on the bottom portion of the accompanying Notice of References Cited (PTO-892) form is not included with this Office action and the PTO-892 has been annotated to indicate that the copy was not readily available, it is because the copy could not be readily obtained when the Office action was mailed. Should applicant desire a copy of such a provisional application, applicant should promptly request the copy from the Office of Public Records (OPR) in accordance with 37 CFR 1.14(a)(1)(iv), paying the required fee under 37 CFR

1.19(b)(1). If a copy is ordered from OPR, the shortened statutory period for reply to this Office action will not be reset under MPEP § 710.06 unless applicant can demonstrate a substantial delay by the Office in fulfilling the order for the copy of the provisional application. Where the applicant has been notified on the PTO-892 that a copy of the provisional application is not readily available, the provision of MPEP § 707.05(a) that a copy of the cited reference will be automatically furnished without charge does not apply.

13. The prior art documents submitted by applicant in the Information Disclosure Statements filed on 01/09/2002 and 05/21/2002, including the Blonder et al. patent relied on in the rejection above, have all been considered and made of record (note the attached copy of form PTO-1449).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00 am to 3:30 pm, second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JD

March 4, 2004



Brian Healy
Primary Examiner